NCTA
NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION

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October 3, 2005

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: CS Docket No. 97-80 (Commercial Availability of Navigation Devices)

Dear Ms. Dortch:

In its Second Report and Order in CS Docket No. 97-80,[1] the Commission directed the six largest multiple system operators ("MSOs") – Comcast Corporation, Time Warner Cable, Cox Communications, Charter Communications, Adelphia Cable, and Cablevision – to file with the Commission "reports detailing CableCARD deployment and support" as well as "the effort to develop and deploy a multistream CableCARD."[2] The Commission noted that the six "cable operators may file separate reports or a joint report." As a matter of convenience, NCTA has compiled the individual company reports and is submitting them as attachments to this letter. Should the Commission have questions about any of these reports, please contact me and I will ensure that the questions are forwarded to the appropriate person at the relevant company for a response.

CableCARD Deployment and Support. We agree with the Consumer Electronics Association ("CEA") that '[c]able, their vendors, and CE have worked in good faith to ensure the successful implementation of CableCARD modules."[3] CEA's President has observed that cable operators "have stuck to their promise to support" CableCARDs,[4] and that is indeed correct. The cable industry in general, and the six companies whose reports are being filed today in particular, have worked diligently to deploy CableCARDs and support CableCARD-enabled products since their launch in July 2004.

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[1] *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, Second Report and Order, 20 FCC Rcd 6794 (2005).

[2] Id. at 21-23 (¶¶ 39, 44). In that Order, the Commission noted that the effective dates for its reporting requirements would be subject to OMB approval. In a subsequent Public Notice (DA 05-1930, released July 1, 2005), the Commission set October 3 (actually October 1 which fell on a Saturday) as the date when the six cable companies should file their reports.

[3] Comments of the Consumer Electronics Association in MB Docket No. 05-255, filed September 19, 2005, at 12.

[4] *Communications Daily*, August 31, 2005, at 10 (quoting CEA President Gary Shapiro).

As of mid-September, there were 363 certified or verified models of CableCARD-enabled products from 22 manufacturers. The six largest MSOs – those which are reporting today and which serve over 80% of the cable subscribers in the country – have deployed over 60,000 CableCARDs. When the CableCARDs deployed by the next four largest companies are included, there have been over 67,000 CableCARDs deployed by cable operators serving 88% of the cable subscribers in the country.

The large number of CableCARDs and CableCARD-enabled devices that have been deployed speaks to the success of this technology. However, as with any new technology, challenges exist. This is particularly the case where a variety of different manufacturers make different CableCARD-enabled "Host" devices (e.g., DTV sets) – each with their own implementation choices – that must work seamlessly with CableCARDs to satisfy consumer expectations. In such cases the complexities of making the new technology work correctly right out of the box is multiplied several fold. As described in the attached reports, cable operators are dealing with these challenges on an individual company basis. For example, cable operators have internal teams assigned to CableCARD support issues, as well as business processes to identify and resolve issues as they arise.

In addition to individual company efforts, the cable industry has instituted a structured and collaborative process to deal with CableCARD deployment and support issues. Since January 2004, NCTA and CableLabs have held weekly conference calls with MSO engineering and operations personnel involved in the fielding and support of CableCARD devices. These calls serve as a forum for sharing lessons learned and best practices, elevating issues for resolution, and disseminating information from manufacturers on software and hardware fixes as problems are identified. In addition, since January 2005, the cable and CE industries have held monthly joint conference calls to share information regarding technical issues with CableCARDs, host devices, and the cable plant so that both industries – and their individual member companies – can better respond in a consistent way to problems that may arise when CableCARDs are installed in Host devices. Moreover, the two industries have shared contact lists of senior engineering personnel at each MSO and CE manufacturer to provide direct lines of communication for problem resolution. Finally, CableLabs personnel have acted as a liaison between the MSOs and CE manufacturers and have established a process which is responsive to the needs of both MSOs and CE manufacturers. This relationship has facilitated the timely identification, investigation and resolution of many of the implementation issues that have been raised with respect to host devices, CableCARDs and cable systems over the last 18 months.

Multistream CableCARDs. The Commission asked for a report on the "effort to develop and deploy a multistream CableCARD." We are pleased to present the following information in response to that request. The specifications for Multistream CableCARDs and the Multistream CableCARD interface are complete. The "M-card" will operate in a backwards compatible, single-stream manner with single stream devices (for example, in a UDCP); or in the multi-stream manner with multi-stream devices. See CableCARD™ Interface 2.0 Specification OC-SP-CCIF2.0-I02-050708, http://www.opencable.com/specifications/.

In October 2005, the HPNxPro (multistream test tool) prototype will be submitted to CableLabs. The HPNxPro is expected to be officially validated for use in mid 2006. (The availability of the HPNx test tool greatly facilitates the work needed by a CE manufacturer to install a multi-stream interface on a retail device. This test tool will be available to be used by CE manufacturers to aid them in the development of multistream CableCard capability in their devices.) Pre-Qualified samples of the multistream CableCARD will be submitted to CableLabs for preliminary testing in the fourth quarter of 2005, with the expectation of full testing and qualification early in 2006. It is expected that multistream CableCARDs will be widely available for use in commercially available commercial devices by mid-2006, and will be supported by MSOs.

If you have any questions about the information being submitted with this letter, please do not hesitate to contact me.

Respectfully submitted,

/s/ Neal M. Goldberg
Neal M. Goldberg

cc: Natalie Roisman
        Julie M. Kearney
        Robert Schwartz

Adelphia FCC CableCARD Report

The following information is required on a quarterly basis starting October 01, 2005 and every 3 months henceforth per the FCC *Second Report and Order* dated March 15, 2005. Adelphia is providing monthly reports to be compiled by the NCTA for FCC reporting.

Adelphia Report: Sept 15, 2005

Reporting Period: <u>Thru Aug 31 2005</u>

1. General availability of CableCARDs

    Motorola: 2160 available inventory
    SA: 2419 available inventory

2. The number of CableCARDs in service as of August 31st

    Motorola: 3499
    SA: 2375

    a. How cards are placed in Service: Professional Install Only

3. Whether service calls are required for all CableCARD installations?

    100% truck roll for installation

4. Average number of truck rolls to install a CableCARD?

    Estimated at 1.06:1

5. Monthly price charged for a CableCARD: $1.75

    Average installation cost of a CableCARD if applicable:
    $40; price is typically waived.

6. Problems encountered in deploying CableCARDs and how problems are resolved?

Issues which are not resolved at the local system level may be escalated to Adelphia's 24x7 Video Operations Group. This group maintains detailed CableCARD information, such as known issues lists, CE-supplied troubleshooting documentation and current software "s/w" releases in an effort to provide local systems with the information they'll need to complete a CableCARD installation. The following 67 issues were escalated to this group during the month of August:

Platform: SA   **System**: Canton
Issue: no HD channels
Corrective Action Taken: revoke/invoke services
Status: Corrected issue

Platform: Moto   **System**: New Philly
Issue: no digital services except HD broadcast
Corrective Action Taken: swapped card, rebooted TV
Status: Customer checking with Host Vendor

Platform: SA   **System**: Clev
Issue: no video on the following channels: Toon Disney, Soap, Hallmark, History, Bio
Corrective Action Taken: 3 different cards tried
Status: site is calling manufacturer

Platform: SA   **System**: Canton
Issue: no HD channels
Corrective Action Taken: revoke/invoke
Status: corrected issue

Platform: Moto   **System**: Van Nuys
Issue: no HD channels
Corrective Action Taken: rebooted TV reseated card
Status: system is contacting manufacturer

Platform: SA   **System**: Utica
Issue: error when using flow through
Corrective Action Taken: wrong host ID
Status: issue resolved

Platform: Moto   **System**: Amelia
Issue: does not display digital channels and the channel #'s are in whole # w/ descent init
Corrective Action Taken: tried other known working card
Status: system is contacting manufacturer

Platform: Moto   **System**: Staunton
Issue: Card did not pair - missing pairing info in billing system
Corrective Action Taken: dispatch tech to retrieve pairing info
Status: open

Platform: SA   **System**: Clev
Issue: error 161-53 when tuning to the HD tier channels
Corrective Action Taken: tech left the house suggested re-pairing the card
Status: open

Platform: SA   **System**: Mooresville
Issue: card was not loaded in Adtran provisioning system
Corrective Action Taken: loaded card in Adtran
Status: card provisioned

Platform: SA   **System**: Clev
Issue: card was not loaded in Adtran provisioning system
Corrective Action Taken: loaded card in Adtran
Status: card provisioned

Platform: SA   **System**: Clev
Issue: flow through not working
Corrective Action Taken: not enough #'s in pairing info
Status: dispatched tech

Platform: Moto   **System**: Augusta
Issue: no video on HD Movies, HD Net, ESPN HD and Discovery HD
Corrective Action Taken: none
Status: ch's are part of HD plus - customer was not authorized.

Platform: SA   **System**: West Palm
Issue: digital and HD Channels freezing after CableCARD installation
Corrective Action Taken: tech to check out plant
Status: open

Platform: SA   **System**: West Palm
Issue: no services - wrong pairing info
Corrective Action Taken: corrected pairing
Status: card is working

Platform: SA   **System**: West Palm
Issue: can not view HD plus channels
Corrective Action Taken: none - tech did not wait for card to download all chs
Status: card is working

Platform: SA   **System**: West Palm
Issue: can not access card from billing system
Corrective Action Taken: pairing info entered incorrectly
Status: card is working

Platform: SA   **System**: Mooresville
Issue: P# error when provisioning from billing
Corrective Action Taken: Card was not loaded on DNCS
Status: card is working

Platform: Moto   **System**: Van Nuys
Issue: TV is not displaying MMI info
Corrective Action Taken: Advised tech to shut down TV and reset the CableCARD
Status: open

Platform: SA   **System**: Clev
Issue: no digital services
Corrective Action Taken: revoke/invoke
Status: corrected issue

Platform: SA   **System**: Brunswick
Issue: Not getting all services
Corrective Action Taken: pairing hit on one TV need to replace CableCARD on a second TV
Status: first TV ok / still waiting on status for second TV

Platform: Moto   **System**: Knoll Rd
Issue: No MMI information
Corrective Action Taken: Card not loaded on DAC
Status: bad CableCARD

Platform: SA   **System**: West Palm
Issue: Bad screen # when trying to hit the CableCARD
Corrective Action Taken: Advised dispatcher there is no package 22
Status: corrected issue

Platform: SA   **System**: Staunton
Issue: Assist installer and dispatcher with install of CableCARD
Corrective Action Taken: Instructed tech on how to find Host ID and Card TM
Status: corrected issue

Platform: SA   **System**: Londonderry
Issue: Not getting all services. No digital channels or over the air HD channels
Corrective Action Taken: Suggested to replace the card
Status: open

Platform: SA   **System**: Clev
Issue: P# error when provisioning from billing
Corrective Action Taken: Card was not loaded on DNCS
Status: corrected issue

Platform: SA   **System**: Londonderry
Issue: Not getting HD or digital channels
Corrective Action Taken: Sent update from billing
Status: open

Platform: Moto   **System**: Knoll Rd
Issue: Unknown
Corrective Action Taken: Customer advised to get a firmware update
Status: open

Platform: SA   **System**: Londonderry
Issue: Lost digital services
Corrective Action Taken: Loaded card on the DNCS
Status: open

Platform: SA   **System**: Staunton
Issue: No video on encrypted channels
Corrective Action Taken: swapped card, rebooted TV
Status: corrected issue

Platform: SA   **System**: Westminster
Issue: Can't get digital services
Corrective Action Taken: pairing info entered wrong Card re-entered
Status: corrected issue

Platform: Moto   **System**: Amelia
Issue: Card installed but "never worked"
Corrective Action Taken: Suggested to replace the card
Status: open

Platform: Moto   **System**: Orange County
Issue: Lost Digital Services
Corrective Action Taken: Entered pairing info in billing
Status: corrected issue

Platform: SA   **System**: West Palm
Issue: P# error when provisioning from billing
Corrective Action Taken: Card was not loaded on DNCS
Status: corrected issue

Platform: SA   **System**: Londonderry
Issue: No services
Corrective Action Taken: Card was not loaded on DNCS
Status: corrected issue

Platform: SA   **System**: Canton
Issue: Lost HD channels (card needed firmware upgrade (one of 861)
Corrective Action Taken: Suggested to replace the card
Status: open

Platform: Moto   **System**: Amelia
Issue: No HD Channels
Corrective Action Taken: none, customer not subscribed to HD services
Status: corrected issue

Platform: SA   **System**: Clev
Issue: No encrypted channels
Corrective Action Taken: Card never installed completely, re inserted card
Status: corrected issue

Platform: SA   **System**: Staunton
Issue: Gets audio, no video
Corrective Action Taken: Asked tech to verify wiring/signal
Status: Open

Platform: SA   **System**: Staunton
Issue: Lost all dgital services
Corrective Action Taken: Replaced card
Status: corrected issue

Platform: Moto   **System**: Van Nuys
Issue: Constantly generating 161-4 error
Corrective Action Taken: Re-initialized card
Status: corrected issue

Platform: HITS   **System**: SE
Issue: No video
Corrective Action Taken: unknown
Status: corrected issue

Platform: SA   **System**: Mooresville
Issue: no digital services
Corrective Action Taken: Corrected pairing info in billing
Status: corrected issue

Platform: SA   **System**: Londonderry
Issue: Getting an error code 161-1 (no encrypted services)
Corrective Action Taken: Re-paired from the controller
Status: corrected issue

Platform: Moto   **System**: Knoll Rd
Issue: Not specified
Corrective Action Taken: Called site back, no one aware of the issue
Status: open

Platform: Moto   **System**: Colorado Springs
Issue: Error "signal can not be decoded"
Corrective Action Taken: Swapped card, same problem, referred to manufacturer
Status: open

Platform: SA   **System**: West Palm
Issue: unknown
Corrective Action Taken: Paired the card on the controller
Status: corrected issue

Platform: SA   **System**: Clev
Issue: No encrypted channels
Corrective Action Taken: Removed IPPV and VOD codes, restaged card
Status: corrected issue

Platform: Moto   **System**: Van Nuys
Issue: Error "validity date of the CableCARD is invalid"
Corrective Action Taken: Suggested to replace the card
Status: open

Platform: Moto   **System**: Colorado Springs
Issue: Not getting any channels
Corrective Action Taken: Suggested to check RF
Status: open

Platform: SA   **System**: Mooresville
Issue: No encrypted channels
Corrective Action Taken: Re-staged card through the controller
Status: corrected issue

Platform: Moto   **System**: Knoll Rd
Issue: No over-the-air HD, Golf Channel appears on incorrect channel
Corrective Action Taken: Initialized the card from the controller, referred to manufacturer
Status: open

Platform: SA   **System**: Staunton
Issue: P#1 error when provisioning from billing
Corrective Action Taken: Loaded card EMM's on controller, re-paired
Status: corrected issue

Platform: Moto   **System**: Van Nuys
Issue: No digital channels
Corrective Action Taken: Tried 6 cards, referred to manufacturer
Status: open

Platform: SA   **System**: Orlando
Issue: No MMI information available
Corrective Action Taken: unknown
Status: open

Platform: SA   **System**: Orlando
Issue: HBO Channels not working
Corrective Action Taken: unknown
Status: open

Platform: SA   **System**: Waterbury
Issue: Getting error "161-6"
Corrective Action Taken: Suggested swapping card
Status: open

Platform: SA   **System**: Clev
Issue: HBO Channels not working
Corrective Action Taken: Re-paired through the controller
Status: corrected issue

Platform: SA   **System**: West Palm
Issue: Not getting over-the-air HD channels
Corrective Action Taken: Re-inserted, referred to manufacturer
Status: open

Platform: SA   **System**: Plymouth
Issue: Intermittent digital channels
Corrective Action Taken: Tried several cards, re-paired from the controller, suggested checking RF
Status: open

Platform: Moto   **System**: Staunton
Issue: Missing some digital channels
Corrective Action Taken: referred to host manufacturer
Status: open

Platform: SA   **System**: Clev
Issue: HBO Channels not working
Corrective Action Taken: Verified authorization, re-paired from the controller, suggested second card
Status: open

Platform: SA   **System**: Clev
Issue: Missing some encrypted HD channels
Corrective Action Taken: Verified authorization, re-paired from the controller, suggested firmware upgrade with host manufacturer
Status: open

Platform: SA   **System**: Staunton
Issue: No video on digital channels, audio present
Corrective Action Taken: Verified authorization, re-paired from the controller, suggested contacting host manufacturer
Status: open

Platform: SA   **System**: Utica
Issue: P#1 error when provisioning from billing
Corrective Action Taken: Loaded EMM's into controller and adtran provisioning
Status: corrected issue

Platform: SA   **System**: Waterbury
Issue: Not getting all channels
Corrective Action Taken: Hit from controller
Status: unknown

Platform: SA   **System**: Utica
Issue: Not getting all channels
Corrective Action Taken: Loaded card EMM's on controller, re-paired
Status: unknown

7).   Process in place for resolving existing and newly discovered CableCARD implementation problems:

a). Adelphia will regularly provide updates to training aides and documentation which is posted to several web sites for access by local system personnel. Adelphia is also in the process of deploying a new Customer Care troubleshooting web tool; Logicall. This web tool provides work flow process tips to help resolve typical customer call issues and will include support for the CableCARD. The tool also provides links for CableCARD training aids and documentation.

b). Adelphia also uses a centralized system for CableCARD install troubleshooting and support. All installs with issues can be escalated to our 24x7 video operations group which tracks issues in a bug database system called TrackIt. When appropriate, CE contacts are used to escalate issues that can not be resolved internally. Adelphia has supported numerous on site visits from CE vendors to aid in troubleshooting issues with newer DTVs.

c). Specific cable card trouble codes and fix codes have been added to the billing systems.

Cablevision
FCC CableCARD Quarterly Report

Introduction: CableCARD technology, which enables digital televisions to display encrypted programming, has been available to 100% of our 3 million customers since July 2004. As CableCARDs are handled as a routine practice in the normal course of business, detailed information on the company experience with problems at installation and repair are not uniquely tracked from other conditional access devices. As with any technical issue with a service provided by the company, when a problem is experienced and a resolution is determined, the information goes into a common database. The response to Question 9 was obtained from that information.

1. Current Number of CableCARD Subscribers: 3,799 (as of September 15, 2005)

2. Number of CableCARDs in Inventory: 4,818 / 2,256 NDS + 2,562 SA Powerkey

3. How are CableCARDs deployed: All CableCARDs are professionally installed

4. Percentage of Installs: 100% Truck Rolls

5. Average Number of Truck Rolls to Install a CableCARD: 1.1

6. Monthly Lease rate for CableCARD: $1.25

7. Average installation Cost (if applicable): Professional install fee is $34.95.

8. Number of problems* encountered with CableCARDs: 421 installation and post-installation problems were encountered during the period of July 1, 2005 through September 15, 2005.

9. Of the problems encountered, how they were resolved:

1. One manufacturer's digital television sets require a separate cable input for the analog channels in order for the customer to view analog signals.
2. There are variations in problems encountered with the host television. The problem is usually resolved through one of the following:
    o   Swap the CableCARD. (Unbind first CableCARD with Addressable Systems Department and install/bind another CableCARD)
    o   The installer will check the television menu guide for information on CableCARDs and follow the instructions in the menu. If that does not work, the customer is asked to call the host television Customer Service number for advice on how to obtain this information on installing the card.
    o   Software upgrade – In some instances, the customer needs to contact the host TV manufacturer for a patch/chip to be sent out for the specific host TV or professional visit by the manufacturers technician.

3. Network problems have required a software patch to enable the card.
4. Certain high definition signals have required a software correction in the addressable system.
5. Problems have occurred in Cable Data in provisioning the card. The entry in Cable Data must be in a particular field to enable the card.

10. Process in place for resolving existing and newly discovered CableCARD implementation problems:

Cablevision has established technical support protocols to enable the technician to receive immediate troubleshooting support from Dispatch, Network Support or Engineering if the technician encounters a problem during the professional installation of CableCARD equipment. It should be noted that

Cablevision responds to each CableCARD performance issue in the same manner we respond to other CE interoperability issues (e.g., DVI, HDMI or 1394 interop issues).

If the technician is unable to complete the installation due to technical issues, the technician is required to record the reason(s) why the install was not completed and the work order remains open. At the customer's request, a follow-up visit is conducted to further troubleshoot the problem and/or install a second (new) CableCARD. At this visit, additional personnel may accompany the technician to provide enhanced technical support. If a customer is unable to activate their equipment due to interoperability issues, Cablevision will contact the CE manufacturer to define the issue, resolve the problem and once again offer the customer the CableCARD installation.

The data (fix codes) collected from the problem are analyzed by the operations and engineering departments to determine if there are systematic issues contributing to the CableCARD technology not functioning properly on the network.

Cablevision has also undertaken significant steps to pro-actively work with all the major CE manufacturers to identify the numerous CableCARD enabled devices and conduct interoperability testing in our (single) test laboratory before any problems have been experienced in the field.

Charter Communications FCC CableCARD Reporting
Through August 31, 2005

1. **Current Number of CableCARD Subscribers as of August 31st, 2005:**

   The total number of Subscribers who have leased or purchased CableCARD devices through August 31st, 2005 is 3900.

2. **Provide the number of CableCARDs in inventory:**

   SA CableCARD devices: 3404
   Moto CableCARD devices: 4197
   Total CableCARD devices: 7601

3. **How are CableCARDS placed in service?**

   Installation of a CableCARD requires a professional installation, including a truck roll, in all serviced areas with the exception of the North Carolina/Virginia market area, in which there is a self-installation process. Self installations account for 0.005% of all CableCARD installations during the reporting period.

4. **Whether service calls are required for all CableCARD installations?**

   Yes.

5. **Average number of truck rolls to install a CableCARD?**

   The average number of truck rolls to install a CableCARD (i.e., the initial truck roll and any truck rolls within 30 days from the date of installation) through August 31st, 2005 was 1.3.

6. **Monthly lease rate for a CableCARD?**

   The average monthly lease for a CableCARD device is $1.50.

7. **Average installation cost of a CableCARD if applicable?**

   The average cost for a professional installation is $32.00.

8. **Process for Resolving CableCARD trouble calls:**

   Customers with a CableCARD problem are directed to call the Charter customer service number. Customer Service Representatives (CSRs) are trained about the features and benefits of CableCARDs, just as they are trained on any other Charter product offering. When CableCARDs were first deployed, Charter held special training for everyone, but now this information is included as part of the regular new-hire training. There are also specific order entry and CableCARD service overview documents available to the CSRs at the time of any CableCARD trouble call. Some CableCARD calls are forwarded to the Advanced Services Team, whose members have more training and expertise on troubleshooting such calls. If the problem cannot be resolved over the phone, the CSR places a service order, which is then fulfilled by the cable installers and technicians. Charter maintains a record of any service calls for which a technician is dispatched.

   Should a local cable installer or technician encounter a CableCARD problem, he/she reports such problem to his/her supervisor and the local technical support group. If the problem is

not resolved at the local level, it is then escalated to corporate engineering or billing. If there appears to be a host problem, Charter has a designated member of its engineering department contact and place a report with the consumer electronics vendors.

Charter has opened its engineering labs to the consumer electronics vendors to allow testing of the CableCARDs in a cable environment in an effort to resolve any host problems. The video lab is maintained near Charter's corporate offices in St. Louis, Missouri, and has been available to consumer electronics manufacturers for CableCARD development and testing. The lab supports both SA and Motorola CableCARDs and has hosted a variety of consumer electronics manufacturers.

Charter itself has spent hundreds of hours working directly with consumer electronics vendors on CableCARD testing in its lab in the following areas:

- Installation and provisioning
- POD-Host authentication - CCI/Copy Protection
- Channel Maps, Source Name Table
- Performance - Analog, Standard Digital, HD Digital - 64/256 QAM
- PSIP
- EAS
- CableCARD Firmware Upgrade.

Charter personnel also participate in organized industry efforts designed to support CableCARD deployment and resolution of CableCARD problems, such as regularly scheduled conference calls with industry associations and other cable companies.

9. **Reported problems associated with CableCARDs and how they were resolved:**

There have been a variety of host, CableCARD and network problems over the course of the reporting period. The CableCARD problems and resolutions listed below are illustrative of the problems encountered at both the local and regional level, as well as those that were escalated to the Charter corporate offices, and may have occurred multiple times.

a. **Host Problems**

- *Problem*: Manufacturer B displaying 161-1 or 161-4 error; seems to be specific to Manufacturer B sets. *Resolution*: Manufacturer B has a new version of code which resolves this issue.

- *Problem*: Host not receiving some encrypted services, diagnostic screen indicates authorization. If host is left tuned to channel for a length of time channel will decrypt but loss of decryption occurs again after tuning off channel and tuning back. *Resolution*: The latest version of Manufacturer A's DTV code has appeared to resolve the issue.

- ***Problem***: Host (Manufacturer A) unable to recognize card. ***Resolution***: Problem resolved by Manufacturer A; customer received firmware upgrade from TV manufacturer.

- ***Problem***: Host (Manufacturer B) unable to tune to digital channels. ***Resolution***: Card removed and auto program initiated on host tuner.

- ***Problem***: (Manufacturer C) Error 1090 authorization failure, card pairing. Incompatibility problems with receiver. ***Resolution***: Required firmware upgrade. Manufacturer C is investigating corrupt code.

- ***Problem:*** Incompatibility problems with Manufacturer F receiver and problems receiving HD channels. ***Resolution***: Required upgrade to new version of firmware.

- ***Problem***: Customers routinely cannot view digital channels (Manufacturer F). ***Resolution***: Manufacturer F has posted a notice on their website.

- ***Problem***: (Manufacturer A) Customer was unable to receive channels in the 100's or HD channels - the only channel that came in was 143. ***Resolution***: Problem identified in DTV firmware loaded by Manufacturer A into host equipment; Problem fixed in next release of Manufacturer A firmware.

- ***Problem***: Issues are with a certain model by Manufacturer D. The TV will redetect the cable card settings at powering on of the TV. ***Resolution***: Manufacturer D resolved problem.

- ***Problem***: Customer received a message "uploading firmware" and waited for 3 hours for something to happen. ***Resolution***: Called Manufacturer E and said that they're going to send one of their technicians to check it out.

- ***Problem***: Various consumers reporting problems with premium channels not coming through after installation has been completed. ***Resolution***: Majority of these problems are host related and generally require a firmware upgrade.

b. CableCARD problems

- ***Problem***: Cable card only finds a handful of digital and analog channels after completing search. Multiple instances of this specifically with manufactured cards between 3/22/05 and 4/29/05. ***Resolution***: Card updated to the latest SA firmware. Firmware upgrade corrects this problem but will then sometimes exhibit problems in next bullet.

- ***Problem***: Host tunes to Starz HD, or Cinemax HD and picture freezes immediately. ***Resolution***: Only very few cards display this behavior. Card swapped for known working card.

- *Problem*: Intermittent loss of services (black screen). *Resolution*: Card was swapped.

- *Problem*: Host stuck "acquiring data". *Resolution*: CC configuration issue on DAC resolved.

c. Network problem
- There have been various problems related to the drops, splitters inside wiring.

Comcast Cable Communications, Inc.
CableCARD Data (Quarterly Report)
June/July/August 2005

Current Number of CableCARD Subscribers	27875
Number of CableCARD in Inventory	26162
How are CableCARDs deployed: Truck Roll / Self Install / Both	Both
Total CableCARD Installs	9801
Number of Installs - Truck Rolls	9437
Percentage of Installs - Truck Rolls	96%
Number of Installs - Self Installs	364
Percentage of Installs - Self Installs	4%
Average Number of Truck Rolls to Install a CableCARD	1.11
Monthly Lease Rate for CableCARD	$0.00
Average Installation Cost (if applicable)	$23.12
Number of problems encountered with CableCARD (trouble call resolution categories)	
Total Number of Problems	2228

Problems encountered and how these problems were resolved

Several newer models from one manufacturer would not operate with CableCARDs and initial calls to the manufacturer support number were not helpful as they seemed to be unaware of any problem. After internal escalations and a couple of months of unsuccessful installation attempts the manufacturer finally provided information that a software upgrade was needed for these models and the software updates were posted on the Internet for download.

One manufacturer's sets did not work properly in HRC and IRC systems with CableCARDs although they seemed to work fine in standard channel plan systems. The problem was escalated to the manufacturer through Comcast corporate engineering and after a couple of on-site visits they released a software update to correct a design problem in the sets. This process took a couple of months.

The launch of digital simulcast created customer confusion and service calls for customers using one manufacturer's sets due the way they chose to separate analog and digital channels between different inputs on the set. Customers with these sets must know if the channel they desire to watch is being delivered in analog or in digital and make the correct selection with the remote.

Several models from two different manufacturers would not work with Motorola CableCARDs until the customer contacted the manufacturer for a software upgrade on their set. (Note: this is true for certain models from several other manufacturers as well.)

Installers were not aware of specific operational details with certain models resulting in excessive installation times and in some cases calls to the set manufacturer for assistance.

It often takes multiple "hits" before the CableCARD and Host accept the channel map.

Sometimes a CableCARD issue can be traced back to improper setup of the customer account in the billing system, possibly resulting in multiple truck rolls.

Process in place for resolving existing and newly discovered CableCARD implementation problems

Comcast has a CableCARD problem escalation process that starts with the local installer/technician and escalates to local supervisory personnel, then to the Division office, and finally to corporate Engineering for further escalation to CableLabs or to senior contacts at the CE manufacturer as needed. The local market is expected to review CableCARD issues lists and troubleshooting information posted on an internal web site prior to escalation. If an issue with the CE Host device is suspected the local market personnel also make an initial contact to the CE manufacturer's standard support line for help prior to escalation.

1. General availability of CableCARDs as of 09/1/05:
    Total CableCARDs devices available: 5211*

    a. Supply availability for SA and Motorola CableCARDs
        SA CableCARD devices: 3566*
        Moto CableCARD devices: 1645*

    *The above numbers only include inventory available in our billing system and inventory currently assigned to FSRs and CSRs. It dos not include inventory assigned to subscriber accounts, inventory pending disposition or repair, etc.

2. The number of Residential CableCARDs in service as of August 31st, 2005:
    Cox TOTAL: 6895
    Moto Total: 3071
    SA Total: 3824

3. How cards are placed in Service
    A professional installation, requiring a truck roll, is currently required for all CableCARD device installs.

4. Whether service calls are required for all CableCARD installations?
    Yes.

5. Average number of truck rolls to install a CableCARD?
    The average number of truck rolls needed to install a CableCARD includes the initial truck roll for the install itself and any truck rolls required within 30 days of the install.

    The average number of truck rolls to install a CableCARD from May 1st, 2005 through July 31st, 2005 was 1.104

    The breakdown for each month is as follows:
    - May 2005: 1.102
    - June 2005: 1.115
    - July 2005: 1.095

6. Monthly price charged for a CableCARD?
    The average monthly rental for a CableCARD device is $1.99

7. Average installation cost of a CableCARD if applicable?
    a. What is the service charge to the subscriber for the installation?
        The average cost for a professional installation is $22.91

8. Problems encountered in deploying CableCARDs and how problems are resolved?
    Total number of trouble calls for all CableCARD issues, escalated and un-escalated:
        June 2005: 937
        July 2005: 1011
        August 2005: 1112

Only the issues that were escalated to the Atlanta corporate offices are described below. Cox also uses a bi-weekly conference call to distribute information to the systems, such as issues lists and CE-supplied troubleshooting documentation, in an effort to provide the systems with the information they'll need to avoid escalation.

a. Host Problems
- Hampton Roads
  - Problem: Customer could not receive any encrypted channels
  - Resolution: Issue resolved when the DCR manufacturer replaced the TV. Customer received a CableCARD install on the July 27th to restore services.
- Rocky Mount
  - Problem: Not decrypting HD channels
  - Resolution: Cox troubleshooting completed without resolution. Cox directed customer to contact the DCR manufacturer for host firmware upgrade. Issue resolved when host firmware upgrade was completed.
- San Diego - **Multiple instances of this issue have occurred**
  - Problem: Host was not receiving any encrypted channels, although the CableCARD diagnostic screen indicates it is authorized
  - Resolution: Known issue. Cox directed customer to contact the DCR manufacturer for a host firmware upgrade.
- Fort Walton
  - Problem: Intermittent channel loss across channel map
  - Resolution: Cox troubleshooting completed without resolution. Customer directed to contact the DCR manufacturer for host firmware upgrade.
- Tyler
  - Problem: Host displaying 161-4 error.
  - Resolution: Known issue; Cox directed customer to contact the DCR manufacturer.
- Omaha
  - Problem: Host is not displaying any digital channels
  - Resolution: Cox troubleshooting completed without resolution. Cox directed customer to contact the DCR manufacturer
- Santa Barbara
  - Problem: Host intermittently not displaying audio and/or video on random channels
  - Resolution: Cox troubleshooting completed without resolution. Cox directed the customer to contact the DCR manufacturer. A representative from the DCR manufacturer went to the customer's home and found that the host firmware needed to be upgraded. Issue resolved with the host firmware upgrade.
- Omaha
  - Problem: Host only displaying analog channels
  - Resolution: Cox troubleshooting completed without resolution. Core issue unknown. Although signal levels did not change the DCR TV began displaying digital channels after several days.
- Omaha
  - Problem: Host only displays analog channels and will not accept 3 digit channel changes (Known issue with this DCR manufacturer).
  - Resolution: No resolution. Customer disconnected service while waiting on host firmware upgrade from the DCR manufacturer.
- Omaha
  - Problem: Host only displaying Analog channels and digital Music Choice channels
  - Resolution: Cox directed customer to contact the DCR manufacturer. Issue resolved with host firmware upgrade from the DCR manufacturer

- Omaha
  - Problem: Host was not displaying channels 301-303 (subset of a subscription package; other channels in the package were displayed correctly.)
  - Resolution: No resolution. Cox completed troubleshooting and directed customer to contact the DCR manufacturer. Customer disconnected service while working with the DCR manufacturer.
- Omaha
  - Problem: Host tunes to HBO Channels, but the picture freezes and will not allow the customer to tune away. DCR TV must be power cycled to reset.
  - Resolution: Core issue unknown. Although signal levels did not change the DCR TV began tuning to all changes without issue after several days.
- Omaha
  - Problem: Host would not display HD Expanded channels. Authorization for channels was confirmed.
  - Resolution: None. Customer decided to take a DVR receiver for guide, recording and time shifting features once she experienced one-way limitations. HD expanded channels were displayed properly with DVR receiver.
- Omaha
  - Problem: Host will not accept 3 digit channel change
  - Resolution: Known Issue: The DCR manufacturer completed a host firmware upgrade, which resolved the issue.
- Connecticut
  - Problem: Host is not receiving authorization for specific packages.
  - Resolution: Cox troubleshooting completed without resolution. Cox directed the customer to contact the DCR manufacturer. The DCR manufacturer stated that the DCR TV has their latest version of firmware and that this is not a known issue. Work continues between Cox and the DCR manufacturer.
- Omaha
  - Problem: Host tuner will not tune to out of band signal.
  - Resolution: Cox troubleshooting completed without resolution. Based on experience with other manufacturers, it is believed the host has a bad tuner. Cox directed customer to contact the DCR manufacturer.
- Hampton Roads
  - Problem: Host is not displaying encrypted digital channels. Cox verified that authorization and pairing are correct.
  - Resolution: Cox continues to work with the DCR manufacturer.
- Tyler/MAC
  - Problem: Host is not receiving package authorization or pairing information.
  - Resolution: Cox troubleshooting completed and signals verified, without resolution. Cox directed customer to contact the DCR manufacturer. While troubleshooting with the DCR manufacturer, customer opted to switch to a receiver. Resolution of issue not found, however issue is no longer occurring with the receiver.
- West Texas
  - Problem: Host tunes to and freezes on Channel 3. DCR TV requires power cycle once frozen.
  - Resolution: Cox troubleshooting completed with no resolution. Cox directed customer to contact the DCR manufacturer.
- West Texas - **2 instances of this issue have occurred.**
  - Problem: Host was not displaying specific digital channels
  - Resolution: Cox troubleshooting completed without resolution. Package authorization was confirmed. Cox directed customer to contact the DCR manufacturer.

b. CableCARD problems
- Tyler/MAC - **2 instances of this issue have occurred.**
  - Problem: Host would not display video, audio or channel information after the CableCARD install.
  - Solution: Issue resolved with CableCARD swap.
- San Diego – CableCARD Firmware Known Issue:
  - Problem: A few customers in San Diego did experience issues related to the known problems of improper loading of the channel map on CableCARDs with a specific release and a date stamp of 3/22/05 through 05/08/2005. Customers impacted prior to notification experienced symptoms including missing channels, no channels, and/or channels that were intermittently unavailable. None of these issues were escalated to Atlanta prior to receiving notification of the issue from the vendor.
  - Solution: Once Cox Communications was notified of the issue, all impacted inventory was isolated and kept from use. For those few customers impacted in San Diego, we swapped their cards to a firmware version with a date stamp prior to 03/22/05. Once the corrected release was made available by the vendor, the isolated CableCARDs were upgraded before being released for use in the field.
- Northern Virginia - **2 instances of this issue have occurred.**
  - Problem: CableCARD continuously attempting to upgrade CableCARD firmware thus disrupting video.
  - Resolution: Issue resolved with CableCARD swap

- Tyler/MAC
  - Problem: Host displayed "Validity of CableCARD" error and would not display the MMI screen.
  - Resolution: Initial CableCARD swap did not resolve the issue. Issue was resolved by a third CableCARD swap.

c. Network problem
- Hampton Roads
  - Problem: CableCARD was not authorizing encrypted channels
  - Resolution: Equipment information was incorrectly entered into the billing system and the controller. Data was corrected and the issue was resolved.

9. Process in place for resolving existing or any newly discovered CableCARD implementation problems
   a. Please describe any internal business process you have in place to report/track/resolve problems prior to escalation to the weekly call or joint call with CE.

   For any CableCARD issues encountered by a subscriber, Cox follows a standard troubleshooting process. If the troubleshooting resolves the issue, no further action is taken. If the troubleshooting procedures do not correct the issue, the issue is escalated to one or more of the following personnel within the system: (i) the Digital test desk; (ii) the IT group, and/or; (iii) the system's DAC or DNCS administrator. If none of the foregoing is able to resolve the issue, a problem form is completed and sent to corporate engineering. The problem form collects specific details about the problem and alerts the engineering team to the relevant issues. Corporate engineering then follows up on the issue, contacting all of the necessary parties (including the CE manufacturer) until the issue is resolved.

   In addition, a representative from each Cox system attends a bi-weekly conference call to discuss relevant CableCARD issues that have not yet been escalated, significant trends in the installation and maintenance of CableCARDs, and customer concerns within the system. Cox also uses this conference call to distribute important information to the systems, such as

CE-supplied troubleshooting procedures or installation documentation. Atlanta operations and Engineering personnel are usually engaged on the call and work with the systems to resolve any issues or concerns.

The DAC and DNCS administrators in each system also have direct connections with ATL operations and engineering to escalate any issues that require immediate assistance.

FCC CableCARD™ Status Report

MSO: **Time Warner Cable**

Current number of CableCARDs customers: **9240**

Number of CableCARDs available in inventory: **7670**

How are CableCARDs deployed? **As a result of different implementation issues that have arisen in the course of CableCARD Host device installations (detailed below), most TWC divisions require a service appointment for CableCARD installations.**

Percentage of installs: **Service Appointment: 82%; Self Install: 18%**

Average number of truck rolls required to install a CableCARD: **1.4**

Monthly lease rate for CableCARD: **$1.75**

Do you charge for CableCARD installs? **Yes - 16 divisions, No - 11 Divisions**

What is the average installation cost? **$18.95**

What is your process in resolving existing and newly discovered CableCARD implementation problems?

Time Warner Cable created a web forum referred to as "eRoom" for resolving existing and newly discovered CableCARD implementation problems. The eRoom allows TWC divisions to share information on issues and work together to resolve them.

The eRoom is also a repository for all documentation and knowledge concerning CableCARD. It currently includes the original CableCARD Playbook (used to kickoff CableCARD support in July '04), upgrade information on CE devices, a list of approved digital cable ready devices, technical bulletins and troubleshooting tips.

Below is an example of a typical recommended division troubleshooting procedure in the event of difficulty in the installation process:

1. **Contact the headend to verify all services authorized and that there is a valid pairing of the Host device and the CC.**

2. **Verify the billing system coding is correct and have the CableCARD "re-hit".**

3. **Research the eRoom website to verify there are no known issues with the particular model of Host device.**

4. **Contact the customer and set up appointment to begin trouble shooting.**

5. Arrive on site with back up CableCARDs. Thoroughly inspect all signal levels, in-band/out-of-band, check for any ingress, and inspect cable wires to ensure proper cable wires are being used.

6. Check the Host device and view the CP Info Screen to see the status of the CableCARD and verify CP auth received, ECM and EMM count, PowerKEY status and Decryption Status.

7. Delete the pairing information from the DNCS, install a new CC and call the headend with the new Pairing info. Have the serial number added into the subscriber's equipment. Send an RHT (re-hit) and confirm the device is functioning correctly.

8. If the device is still not functioning, the CableCARD is tested back at the HE to confirm it is working correctly. Once the card is verified to be a "good card", the manufacturer of the Host device is contacted and a report is issued. The same report is also posted on the eRoom and corporate support is contacted for assistance. The customer is then contacted and informed the issue has been escalated to the CE manufacturer.

Problems encountered with CableCARDs and their resolution

Our divisions have reported a variety of different issues arising with respect to CableCARD Host device installations. These examples are provided below to give the Commission an indication of how the process is working and of the issues, to the extent any have arisen, commonly encountered. More detail reports of each of these issues has been retained by TWC.

Problem: Incorrect software on Host device. This has caused the majority of CableCARD issues reported to date. In some cases, the Host device would not function at all and in other cases the Host would lose video or audio on certain channels. These issues are usually discovered at time of installation.

Resolution: The customer must contact the CE manufacturer to request a software patch to upgrade the TV. A follow-up service appointment is needed after the CE manufacturer has upgraded their Host device.

Problem: Bent pins on Host device. One particular CE Host had a manufacturing issue with their CableCARD slot. Inserting the card multiple times into the Host caused the pins in the device to bend and not make proper contact with the card.

Resolution: The CE manufacturer issued an ops alert recommending an adapter to avoid the bent pins.

Problem: Improper seating of CableCARD into the Host device. One particular CE Host requires the card to be inserted flush to the rear of the Host. If the card is not inserted properly, the card will not bind to the Host.

Resolution: An ops alert bulletin was posted on the eRoom with the CE Host brand and model number.

Problem: 161-6 error code on Host device. This was discovered on one particular CE device and required extensive troubleshooting.

Resolution: The issue was caused by a faulty DTV tuner in the Host device. The CE manufacturer issued an 800 number for customers to call to have their Host devices repaired.

Problem: Incorrect hookup of RF cable to Host device. One CE manufacturer's devices require two RF inputs in order for the device to receive all cable channels. This has caused customer confusion as they are required to select separate inputs for their digital and analog channels.

Resolution: An Ops alert was issued on eRoom informing divisions of this unique installation and operation procedure.

Problem: Loss of encrypted channels due to CP key refresh. This was discovered on one particular CE Host device.

Resolution: The CableCARDs were upgraded to resolve this issue.

Problem: CableCARD stuck in file download mode.

Resolution: The issue was resolved by correctly setting the download in the DNCS. An Ops bulletin was issued to all divisions to ensure proper download settings.

Problem: Defective CableCARDs.

Resolution: Returned to manufacturer.

Problem: Low RF levels at Host device.

Resolution: Repair or replace the customer's in-home wiring.